

**REMARKS***Rejections Relying on 35 U.S.C. § 102(e)*

Applicant notes that references used in support of the rejections rely on 35 U.S.C. § 102(e). In responding to the rejections, Applicant does not admit that the references are prior art and Applicant specifically reserves the right to swear behind these references at a future date. However, Applicant contends that the claims are patentably distinct from the cited references as presented herein.

*Claim Rejections Under 35 U.S.C. § 102*

Claims 1-2, 7-11, 24-25, and 30-33 were rejected under 35 U.S.C. § 102(e) as being anticipated by Bonta et al. (U.S. Publication No. 2004/0063451 A1). Claims 16-23 and 39-46 were rejected under 35 U.S.C. § 102(e) as being anticipated by Tuomainen et al. (U.S. Patent No. 7,020,102 B2). Applicant respectfully traverses.

Claims 1-2, 7-11, 24-25, and 30-33

Applicant's independent claims 1 and 24 each require that a central station performs the task of identifying a relay path to a remote station with which it has lost communications. Bonta et al. simply does not teach or suggest such an ability. Instead, Bonta et al. requires that a remote station create its own ad hoc network path and register itself with the central station to enable use of that ad hoc network path. Without this registration from the remote station, Bonta et al.'s central station has no knowledge that a remote station is outside its communication area. Even with this registration, the central station of Bonta et al. has no knowledge of the relay path being used. *See, e.g.,* Bonta et al., paragraphs 0016-0019.

Applicant has disclosed methods and systems in which the central station determines which remote stations to designate as lost stations in response to communication failures between the central station and the lost stations, and identifies a relay path to re-establish communications with that lost station. *See, Specification, paragraph 0007* ("The central station controller labels any of the remote stations that cannot be reached as 'lost stations.' Thus, in the event that the central station fails to receive an acknowledgment reply from anyone of the remote station transceivers, the central station control identifies that remote station as a lost station and

begins a routine that will identify which of the other remote stations has the ability to communicate with the lost station.”). Thus, while Bonta et al. relies on a remote station to self identify as being out-of-coverage and to propose its possible relay paths, the methods and systems of the present application facilitate autonomous identification of lost stations and creation of relay paths. Such features are recited in claims 1 and 24, and are neither disclosed nor suggested by Bonta et al.

Claim 1 recites, in part, “identifying from said central station at least one of said remote stations that can act as a relay station that can relay information from said central station to said lost station or to another of said remote stations that can also act as a relay station.” Because claim 1 requires the identification of relay stations to occur from the central station, claim 1 is patentably distinct from the cited reference in which lost stations (Bonta et al.’s out-of-coverage subscribers) must create their own ad hoc network path to the central station (Bonta et al.’s network equipment).

Claim 24 recites, in part, “wherein, said central station controller is programmed to: . . . identify at least one of said remote stations that can act as a relay station that can relay information from said central station to said lost station or to another of said remote stations that can also act as a relay station.” As noted with respect to claim 1, Applicant contends that the cited reference does not teach or suggest at least this limitation in that Bonta et al.’s network equipment is not programmed to identify remote stations that can act as a relay station that can relay information from the central station to a lost station or to another remote station that can also act as a relay station. Applicant thus contends that claim 24 is patentably distinct from the cited reference as presented.

In view of the foregoing, Applicant respectfully submits that claims 1 and 24 are allowable over the cited reference. As claims 2 and 7-11 include all patentable limitations of claim 1, and claims 25 and 30-33 include all patentable limitations of claim 24, these claims are also believed to be allowable. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 U.S.C. § 102(e), and allowance of claims 1-2, 7-11, 24-25 and 30-33.

Claims 16-23 and 39-46

Applicant's independent claims 16 and 39 each require that a controller control power modes of the remote stations to operate in a repeating cycle of a low power mode for a first selected period of time followed by a power up mode for a second selected period of time if no information is being received from a central station, but to remain in the power up mode for an additional period of time if the controller detects that information is being received from the central station. This additional period of time is defined to include a period of time until the remote station has received the detected information, processed that information and sent a reply back to the central station, after which the controller switches the remote station back to the low power mode for the first selected period of time. Thus, each period of low power mode is the same period of time while each period of power up mode is variable in length, thus creating cycles of variable length. *See*, Specification, paragraph 0040 (“[T]he on periods adjust in length depending upon whether the RS 14 is receiving, transmitting or processing information, while the off periods remain relatively constant. As a result, the total cycle T2 shown in FIG. 6 is longer than the cycle T1.”).

The operation as recited in claims 16 and 39 is thus patentably distinct from that described in Tuomainen et al. where both its idle state (low power mode) and active or standby states (power up mode) have variable time periods based on a calculation of the timing of the next incoming message and whether a message was received in order to maintain synchronization with expected incoming messages. *See, e.g.*, Tuomainen et al., column 11, lines 48-52 (“In order to calculate the length of the idle state, it has to be discovered when the next paging message UD1 will be sent and in which frame a synchronization burst will be sent in the SCH channel before this paging period.”). Because Tuomainen et al. teaches a variable length idle time, Applicant contends that Tuomainen et al. expressly teaches away from Applicant's claims 16 and 39 as they both recite consistent time periods for each low power mode.

In view of the foregoing, Applicant respectfully submits that claims 16 and 39 are allowable over the cited reference. As claims 17-23 include all patentable limitations of claim 16, and claims 40-46 include all patentable limitations of claim 39, these claims are also believed to be allowable. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 U.S.C. § 102(e), and allowance of claims 16-23 and 39-46.

*Claim Rejections Under 35 U.S.C. § 103*

Claims 12-15 and 35-38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bonta et al. (U.S. Publication No. 2004/0063451 A1) in view of Tuomainen et al. (U.S. Patent No. 7,020,102 B2). Applicant respectfully traverses.

Applicant contends that it has shown claims 1 and 24 to be patentably distinct from the primary reference of Bonta et al. The secondary reference of Tuomainen et al. does not cure the deficiencies of the Bonta et al. reference. Particularly, the secondary reference of Tuomainen et al. does not teach or suggest a central station performing the task of identifying a relay path to a remote station with which it has lost communications. As such, Bonta et al. and Tuomainen et al., taken either alone or in combination, fail to teach or suggest at least these limitations of claims 1 and 24.

In view of the foregoing, Applicant respectfully submits that claims 1 and 24 are allowable over Bonta et al. and Tuomainen et al., taken either alone or in combination. As claims 12-15 include all patentable limitations of claim 1, and claims 35-38 include all patentable limitations of claim 24, these claims are also believed to be allowable. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a), and allowance of claims 12-15 and 35-38.

*Allowable Subject Matter*

Claims 3-6 and 26-29 were objected to as being dependent upon a rejected base claim, but were indicated as being allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims. Applicant submits that it has shown independent claims 1 and 24 to be patentably distinct from the cited references. As claims 3-6 contain all patentable limitations of claim 1, and claims 26-29 contain all patentable limitations of claim 24, these claims are believed to be allowable in their current form. Applicant thus respectfully requests reconsideration and withdrawal of the objection, and allowance of claims 3-6 and 26-29.

CONCLUSION

In view of the above remarks, Applicant believes that all pending claims are in condition for allowance and respectfully requests a Notice of Allowance be issued in this case.

The Examiner is invited to contact Applicant's Representative at 321-867-7214 if there are any questions regarding the Response or if prosecution of this application may be assisted thereby. No new matter has been entered and no additional fee is required by this Response. Please charge any additional fees necessary to maintain pendency of this patent application to Deposit Account No. 14-0116.

Respectfully submitted,

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Date

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